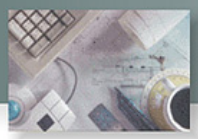

Product Component

DEFINITION	
Name	ESRI ArcGIS 8.x
Description	A scalable line of desktop GIS and mapping software. ArcGIS is a tiered product line consisting of ArcView, ArcEditor, and ArcInfo Desktop and Workstation. It is a comprehensive, enterprise GIS software that can perform mapping, geographic data creation, management, integration, and analysis. For this software release the vendor moved from a coverage data model to a geodatabase model, which incorporates powerful relational database principles. ArcGIS is built using ArcObjects, which is based on Microsoft's Component Object Model (COM) that allows for extensive software customization.
Rationale	• ESRI is a de facto state standard for GIS software (157 cities, 107 counties, 58 regional agencies, and most state agencies). • ESRI is the only GIS company on state contract. • Currently operating successfully within state infrastructure. • Meets the Geospatial Metadata criteria defined within Missouri Adaptive Enterprise Architecture (MAEA). • Industry leader in Geographic Information Systems. • State educational institutions commonly use these products in their training and education programs.
Benefits	The benefits of adopting a single suite of GIS software are that it: • Allows for the development of applications and database components that can be easily shared between systems. • Allows for combined training costs. • Allows for increased purchasing and negotiation power with the vendor for training, software, and services. Documenting this software suite within the MAEA will: • Provide guidance and direction to local government in evaluating the utility of this software to their situation. • Aid in the coordination of statewide data development protocols.

ASSOCIATED ARCHITECTURE LEVELS	
Specify the Domain Name	Information
Specify the Discipline Name	Geographic Information Technology
Specify the name of the associated Technology Area	Geographic Information Systems

KEYWORDS	
List Keywords	Geographic Information System (GIS), desktop, software, mapping, Environmental Systems Research Institute (ESRI), ArcGIS, ArcInfo, ArcView, geocode, geodatabase, ArcEditor, ArcMap, ArcToolbox, ArcCatalog

VENDOR INFORMATION			
Vendor Name	ESRI	*Website*	http://www.esri.com/

Contact Information	State Contract Number: C202051001 http://www.oa.mo.gov/purch/contracts/index.htm Current end date: February 2006 ESRI Missouri Branch Office: (636) 949-6620 (St. Louis Office)		
POTENTIAL COMPLIANCE SOURCES			
Name	OpenGIS Consortium	*Website*	http://www.opengis.org/
Contact Information			
Name		*Website*	
Contact Information			
COMPONENT REVIEW			
List Desirable aspects	**Data manipulation** – Allows integration of many different formats and data models; Allows for connection to popular DBMS; Fairly robust import/export functionality; Excellent projection algorithms; Enhanced editing tools; Good metadata handling and retrieval. **Analysis** – Geoprocessing tools are good; Analysis functionality in buffering, selection, query, etc.; Good image integration; Good geocoding functions; Geostatistical analysis functions are greatly improving. **Extensions** – Very robust set of extensions covering many application areas of geospatial processing and analysis (i.e. hydrological, grid, network, COGO, etc.). **Cartography** – Basic map output functionality; Can create a functional map through the interface but to create a really good map you need to thoroughly understand the depth of the interface; Symbol and font sets are very good; Ability to create transparent layers is good; Thematic data classification and histogram development is good; The development of style sheets is a good idea; Basic map elements (legend, key, north arrow, etc.) is good. **Topology** – Supports topological relationships with editing, error reporting, and interaction relationships with the use of the geodatabase model. **Customization** – Allows for customization and development of extensions, etc. within the software; Can be used as an enterprise solution; Interoperable components can be leveraged on data or DBMS side; Can selectively develop GUI based on class of user and application needs. **Training / Education** – Have developed a large number of classes; Has a wide variety of training media options (web, classroom, on-site); ESRI certified trainer program; State GIS Conference and MAGIC Symposium provide opportunities for education and training. **User Support** – Extensive on-line knowledge base available; Large number of user groups in the state; Large in-state peer-to-peer forum; Help function within ArcGIS is fairly complete.		

List Undesirable aspects	**Data manipulation** – CADD formats not handled as well as they should; Data creation and editing is more difficult in the most recent release as more functionality has been included; Data often requires export to interact with other statistical or data manipulation applications; To take full advantage of DBMS the purchase of middleware (i.e. Spatial Database Engine (SDE), etc.) is required. **Analysis** – Report generation is conducted via a wizard but can prove difficult for some users; Must use ArcCatalog to modify tables (their formats and definitions); Chart development is not very robust. **Extensions** – Extra cost associated with each extension; Training on any specific extension is limited or not available. **Cartography** – The 'Developer Sample' map book does not install by default; Automatic labeling and overposting sequencing does not provide consistent results; Map templates are not robust; Not WYSIWYG; Style sheet portability needs work; No support for multiple map layouts; For maps with large file sizes you need to purchase additional software (i.e. ArcPress) to create the hardcopy maps. **Topology** – With the development of non-topological object relationships, analysis functions and the output of geospatial analysis needs to be examined thoroughly for sensitivity of the analysis to these relations. **Customization** – History of changing the programming language base for development; With training it is really customizable. **Training / Education** – Cost, location, and availability is many times prohibitive to participation. **User Support** – ESRI technical support varies to individual contacted.		
Operating System	ArcGIS-ArcView Windows NT 4.0 (SP6a), 2000, XP ArcGIS-ArcEditor/ArcInfo Desktop Windows NT 4.0 (SP6a), 2000, XP, 2000 Advance Server, Server 2003 Standard ArcInfo Workstation Windows NT 4.0 (SP6a), 2000, XP, 2000 Advance Server, Server 2003 Standard	*Platform*	PC-Intel Several UNIX platforms Sun (Solaris), HP (HP-UX), IBM (AIX), SGI (IRIX), Compaq (True64), Red Hat Linux - Intel
ASSOCIATED COMPLIANCE COMPONENTS			
Product			
List the Product-specific Compliance Component Names	Visual C++, VB, VBA, .NET and COM		

Configuration Links	
List the Configuration-specific Compliance Component Names	

COMPONENT CLASSIFICATION

Provide the Classification	☐ *Emerging* ☒ *Current* ☐ *Twilight* ☐ *Sunset*
Sunset Date	

COMPONENT SUB-CLASSIFICATION

Sub-Classification	Date	Additional Sub-Classification Information
☒ *Technology Watch*	6/04	ArcGIS 9.x is due to be released
☐ *Variance*		
☐ *Conditional Use*		

RATIONALE FOR COMPONENT CLASSIFICATION

Document the Rationale for Component Classification	The majority of state agencies are currently using the ArcGIS 8.x platform as their primary GIS software. The ArcGIS suite is ESRI's new direction in GIS software. Versions 8.1 through 8.3 are fully supported. Future versions of ESRI software will be built on this current package.

MIGRATION STRATEGY

Document the Migration Strategy	

IMPACT POSITION STATEMENT

Document the Position Statement on Impact	

AGENCIES

List the Agencies Currently Utilizing this Product	Dept. of Agriculture, Dept. of Conservation, Dept. of Economic Development, Dept. of Elementary and Secondary Education, Dept. of Health and Senior Services, Dept. of Natural Resources, Dept. of Revenue, State Emergency Management Agency, Dept. of Transportation

CURRENT STATUS

Provide the Current Status	☐ *In Development* ☐ *Under Review* ☒ *Approved* ☐ *Rejected*

AUDIT TRAIL

Creation Date	03/30/2004	*Date Approved / Rejected*	06/08/04
Reason for Rejection			
Last Date Reviewed		*Last Date Updated*	
Reason for Update			